

Linear Regression and the Correlation Coefficient

Class Notes:

A number (r) that tells how well the equation you generated through your regression correlates to your data.

r^2 is the correlation coefficient squared.

R will vary between 0 (no correlation) and 1 (perfect correlation). Closer to one, the better the correlation.

To turn it on in the ti-83's, you are going to go to the catalog menu. This is a 2nd, 0. Then scroll down till you find DiagonisticOn. Hit enter, then hit enter again.

Now repeat your regression, and you will find r and r^2 to be shown at the bottom of the regression.

For homework:

Give me the best linear model for the data below, and also list the correlation coefficient.

Year	Basic Cable Phone Subscribers
1998	.1
1999	.3
2000	1.0
2001	1.5
2002	2.5
2003	3.0
2004	3.8
2005	5.9
2006	9.5
2007	14.9
2008	19.6
2009	22.2
2010	23.9